

AMENDMENTS TO THE CLAIMS:

Please amend Claims 24, 27, 64, 67, and 72 as follows:

1 - 23. (Cancelled)

24. (Currently Amended) A printing apparatus comprising:

a scanner for reading an image of a document and outputting an image signal;

a control unit adapted for controlling said printing apparatus and performing image processing on the image signal output from said scanner to provide a first processed image signal, the image processing being processing that is necessary for copying;

a first bidirectional general-purpose interface adapted for transmitting, under control of said control unit, the image signal output by said scanner to an external computer, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer, the image processing performed by the external computer being processing that is necessary for copying; and

a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface adapted for outputting the first processed image signal and the second processed image signal to a printing unit,

wherein said printing apparatus has a plurality of modes including a read mode, a print mode, a first copying mode, and a second copying mode,

wherein, in the read mode for performing a read operation in accordance with reception of a read command outputted from the external computer in response to a read key operation of the external computer conducted by a user, the image signal from said scanner is transmitted to the external computer via said first bidirectional general-purpose interface,

wherein, in the print mode for performing a print operation in accordance with reception of a print command outputted from the external computer in response to a print key operation of the external computer conducted by the user, the image signal from the external computer is transmitted to the printing unit via said first bidirectional general-purpose interface and said second bidirectional general-purpose interface,

wherein, in the first copying mode for performing a first copying operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation ~~of~~ at the external computer conducted by the user, the copy key operation comprising selecting copying and instructing a start of copying, the image signal from said scanner is transmitted to the external computer, where the image signal is processed into the second processed image signal, via said control unit and said first bidirectional general-purpose interface in accordance with reception of the read command, and thereafter the second processed image signal is transmitted to the printing unit via said first bidirectional general-purpose interface, said control unit, and said second bidirectional general-purpose interface in accordance with reception of the print command, the first copying operation being completed without requiring any additional key operation ~~of~~ at the external computer conducted by the user other than the copy key operation, and

wherein, in the second copying mode for performing a second copying operation based on the first processed image signal, the image signal from said scanner is transmitted to said control unit where the image signal is processed into the first processed image signal and the first processed image signal is transmitted to the printing unit via said second bidirectional general-purpose interface.

25 - 26. (Cancelled)

27. (Currently Amended) A printing method for a printing apparatus capable of operating in a plurality of modes including a read mode, a print mode, a first copying mode, and a second copying mode, said method comprising the steps of:

in the read mode for performing a read operation in accordance with reception of a read command outputted from the external computer in response to a read key operation of the external computer connected to the printing apparatus with a first bidirectional general-purpose interface, the read key operation being conducted by a user, reading an image of a document and outputting an image signal by means of a scanner, and transmitting the image signal output by the scanner to the external computer via the first bidirectional general-purpose interface,

in the print mode for performing a print operation in accordance with reception of a print command outputted from the external computer in response to a print key operation of the external computer conducted by the user, receiving an image signal transmitted from the external computer via the first bidirectional general-purpose interface and outputting the image signal to a printing unit via a second bidirectional general-purpose interface of a same standard as the first

bidirectional general-purpose interface,

in the first copying mode for performing a first copying operation based on a second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation ~~of~~ at the external computer conducted by the user, the copy key operation comprising selecting copying and instructing a start of copying:

(a) reading an image of a document and outputting an image signal by means of the scanner;

(b) transmitting the image signal output by the scanner to the external computer via the first bidirectional general-purpose interface, wherein the external computer performs image processing on the transmitted image signal to provide the second processed image signal, the image processing being processing that is necessary for copying, wherein said reading and said transmitting are performed in accordance with reception of the read command;

(c) receiving the second processed image signal from the external computer via the first bidirectional general-purpose interface; and

(d) outputting the second processed image signal to the printing unit via the second bidirectional general-purpose interface, wherein said receiving and outputting are performed in accordance with reception of the print command, wherein the first copying operation is completed without requiring any additional key operation ~~of~~ at the external computer conducted by the user other than the copy key operation, and

in said second copying mode for performing a second copying operation based on a first processed image data:

- (a) reading an image of a document and outputting an image signal by the scanner;
- (b) performing image processing on the image signal output by the scanner, to provide a first processed image signal, the image processing being processing that is necessary for copying, and
- (c) outputting the first processed image signal to the printing unit via said second bidirectional general-purpose interface.

28 - 57. (Cancelled)

58. (Previously Presented) The printing apparatus according to claim 24, wherein said scanner generates a color image signal.

59. (Previously Presented) The printing apparatus according to claim 24, wherein said control unit has a density adjusting function.

60 - 63. (Cancelled)

64. (Currently Amended) A printing apparatus comprising:
a scanner for reading an image of a document and outputting an image signal;
a control unit adapted for controlling said printing apparatus and performing image processing on the image signal output from said scanner to provide a first processed image signal, the image processing being processing that is necessary for copying;

a first interface adapted for transmitting the image signal output by said scanner to an external computer, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer, the image processing performed by the external computer being processing that is necessary for copying; and

a second interface adapted for outputting the first processed image signal and the second processed image signal to a printing unit,

wherein said printing apparatus has a first copying mode, and a second copying mode,

wherein, in the first copying mode for performing a first copy operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation ~~of~~ at the external computer conducted by a user, the copy key operation comprising selecting copying and instructing a start of copying, the image signal is transmitted to the external computer, where the image signal is processed into the second processed image signal, via said control unit and said first interface in accordance with reception of the read command, then the second processed image signal is transmitted to the printing unit via said first interface, said control unit, and said second interface in accordance with reception of the print command, the first copying operation being completed without requiring any additional key operation ~~of~~ at the external computer conducted by the user other than the copy key operation, and

wherein, in the second copying mode for performing a second copying operation based on the first processed image signal, the image signal is transmitted to said control unit where the

image signal is processed into the first processed image signal and the first processed image signal is transmitted to the printing unit via said second interface.

65. (Cancelled)

66. (Previously Presented) The printing apparatus according to claim 64, wherein said printing apparatus has a print mode, in which print data is transmitted from the external computer to said control unit via said first interface and the printing unit prints the print data in response to a print key operation of the external computer conducted by the user, and an image reading mode in which an image signal from the scanner is transmitted from said control unit from the external computer via said first interface in response to a read key operation of the external computer conducted by the user.

67. (Currently Amended) A printing method for a printing apparatus capable of operating in a first copying mode and a second copying mode, said method comprising the steps of:

in the first copying mode for performing a first copying operation based on a second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation ~~of~~ at the external computer connected to the printing apparatus with a first interface, the copy key operation being conducted by a user, and the copy key operation comprising selecting copying and instructing a start of copying:

(a) reading an image of a document and outputting an image signal by a scanner;

(b) transmitting the image signal output by the scanner to the external computer, via the first interface, wherein the external computer performs image processing on the transmitted image signal to provide a second processed image signal, the image processing being processing that is necessary for copying, wherein said reading and said transmitting are performed in accordance with reception of the read command;

(c) receiving the second processing image signal from the external computer via the first interface; and

(d) outputting the second processed image signal to a printing unit via a second interface, wherein said receiving and said outputting are performed in accordance with reception of the print command, wherein the first copying operation is completed without requiring any additional key operation ~~of~~ at the external computer conducted by the user other than the copy key operation, and

in the second copying mode for performing second copying operation based on a first processed image data:

(a) reading an image of a document and outputting an image signal by the scanner;

(b) performing image processing on the image signal output by the scanner, to provide a first processed image signal, the image processing being processing that is necessary for copying; and

(c) outputting the first processed image signal to the printing unit via the second interface.

68 - 70. (Cancelled)

71. (Previously Presented) The printing apparatus according to claim 66, wherein, in the read mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of a read command transmitted from the external computer in response to the read key operation,

wherein, in the print mode, the image signal from the external computer is transmitted to the printing unit in accordance with reception of a print command transmitted from the external computer in response to the print key operation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the external computer in accordance with reception of the read command transmitted from the external computer in response to the copy key operation, and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command transmitted from the external computer in response to the copy key operation.

72. (Currently Amended) A printing system comprising a printing apparatus and an information processing apparatus,

wherein the information processing apparatus includes:

- (a) a copying designation unit, adapted to designate a start for copying; and
- (b) a processing unit, adapted to process an image signal to provide a second processed image signal, and

wherein the printing apparatus comprises:

(a) a scanner for reading an image of a document and outputting an image signal;

(b) a control unit adapted for controlling said printing apparatus and performing image processing on the image signal output from said scanner, to provide a first processed image signal, the image signal processing being processing that is necessary for copying;

(c) a first interface for transmitting, under control of said control unit, the image signal output by said scanner to said information processing apparatus, which performs image processing on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the information processing apparatus, the image processing being processing that is necessary for copying;

(d) a second interface adapted for outputting the first processed image signal and the second processed image signal to a printing unit; and

(e) a ~~copy~~ key for designating a start for copying,

wherein said printing apparatus has a plurality of modes including a first copying mode performed in response to a copying designation by said information processing apparatus, and a second copying mode performed in response to a copying designation by said copy key,

wherein, in the first copying mode for performing a first copy operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a ~~copying designation~~ copy key operation at the external computer by the user, the copy key operation comprising selecting copying and

designating a start of copying, the image signal from said scanner is transmitted to said information processing apparatus, where the image signal is processed to the second processed image signal, via said control unit and said first interface in accordance with reception of the read command, and thereafter the second processed image signal is transmitted to the printing unit via said first interface, said control unit, and said second interface in accordance with reception of the print command, wherein the first copy operation is completed without requiring any additional ~~designation~~ key operation at the external computer by the user other than the ~~copying~~ designation copy key operation, and

wherein, in the second copying mode for performing a second copy operation based on the first processed image signal, the image signal from said scanner is transmitted to said control unit where the image signal is processed to the first image signal and the first image signal is transmitted to the printing unit via said second interface.

73. (Previously Presented) The system according to claim 72, wherein said information processing apparatus further comprises:

a read designation unit, adapted to designate a start for reading of a document; and
a print designation unit, adapted to designate a start for printing data that said information processing apparatus transmits,

wherein said printing apparatus has a print mode, in which print data is transmitted from the information processing apparatus to said control unit via said first interface and the printing unit prints the print data in response to a print designation designated by the print designation unit, and an image reading mode in which an image signal from the scanner is

transmitted from said control unit from the information processing apparatus via said first interface in response to a read designation designated by the read designation unit.

74. (Cancelled)

75. (Previously Presented) The system according to claim 73, wherein, in the read mode, the image signal from said scanner is transmitted to the information processing apparatus in accordance with reception of a read command transmitted from the information processing apparatus to the printing apparatus in response to the read designation,

wherein, in the print mode, the image signal transmitted from the information processing apparatus to the printing apparatus is transmitted to the printing unit in accordance with reception of a print command transmitted from the information processing apparatus to the printing apparatus in response to the print designation, and

wherein, in the first copy mode, the image signal from said scanner is transmitted to the information processing apparatus in accordance with reception of the read command transmitted from the information processing apparatus in response to the copying designation, and thereafter the second processed image signal is transmitted to the printer in accordance with reception of the print command transmitted from the information processing apparatus to the printing apparatus in response to the copying designation.